

REMARKS

This is in response to the Office Action dated May 27, 2009. In view of the foregoing amendments and following representations, reconsideration is respectfully requested.

By the above amendment, claims 1-5 have been amended. Thus, claims 1-11 are currently pending in the present application.

The specification and abstract have been reviewed and revised in order to make a number of minor clarifying and other editorial amendments. Note that the changes to the abstract are submitted in the form of a substitute abstract. Copies of the amended portions of the specification, claims and abstract with changes marked therein are attached.

Response to Prior Art Rejections under 35 U.S.C. §102(b)

On page 2 of the Office Action, original claim 5 is rejected under 35 U.S.C. 102(b) as being anticipated by Lin et al. (U.S. Patent No. 5,876,666). As will be demonstrated below, the Lin reference does not disclose each and every feature of amended claim 5, and therefore cannot anticipate the claim. As instructed in MPEP 2131, “a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Lin discloses a hydrogen peroxide plasma sterilization system including a chamber 30, a vacuum pump 36 for evacuating the chamber, a hydrogen peroxide supply unit 42, and a plasma generation unit 50, 52, 54 (see Fig. 2; col. 10, line 48 to col. 11, line 14). However, the Lin system lacks an ozone supply unit for supplying ozone into the chamber after supplying the hydrogen peroxide as required in claim 5. Note that the process disclosed by Lin does not include supplying ozone to the chamber (see col. 11, lines 14-48). Accordingly, the Lin

reference does not meet each and every limitation of claim 5, and therefore cannot anticipate claim 5 under 35 U.S.C. 102(b).

Response to Prior Art Rejections under 35 U.S.C. §103(a)

On pages 3-7 of the Office Action, claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duroselle (U.S. Patent No. 6,096,266) in view of Lin et al. (U.S. Patent No. 5,876,666) or Jacobs et al. (U.S. Patent No. 4,756,882). It is submitted that the present invention, as embodied by the amended claims, now clearly distinguishes over the applied prior art references for the following reasons.

Duroselle discloses a method (col. 1, lines 35-53) for disinfecting and sterilizing microbial contaminated or infectious materials including the follow steps:

- (a) loading the material into the chamber;
- (b) introducing liquid hydrogen peroxide into the chamber;
- (c) introducing liquid acetic acid into the chamber;
- (d) evacuating gas from the chamber to partially evaporate the liquid;
- (e) introducing gaseous ozone into the chamber; and
- (f) treating the material in the chamber for a sufficient time.

However, the Duroselle process lacks the steps required in claim 1 which include decompressing the chamber, supplying hydrogen peroxide after the decompression step, supplying ozone after supplying the hydrogen peroxide, sterilizing the object, exhausting gas from the chamber after the sterilization, and generating plasma after exhausting the gas from the chamber.

Lin discloses a sterilization process (col. 11, lines 14-48) including:

1. placing articles in the chamber;
2. evacuating the chamber;
3. delivering hydrogen peroxide into the chamber;
4. sterilizing the articles with peroxide vapor before generating plasma; and
5. subjecting the articles to plasma generated by applying power from a power supply 54 to electrode 50.

The Lin process, however, lacks the steps required in claim 1 which include decompressing the chamber, supplying hydrogen peroxide after the decompression step, supplying ozone after supplying the hydrogen peroxide, sterilizing the object, exhausting gas from the chamber after the sterilization, and generating plasma after exhausting the gas from the chamber.

Jacobs discloses a sterilization process (col. 5, line 50 to col. 6, line 11) including the following steps:

- (1) placing the article in a chamber;
- (2) evacuating the chamber;
- (3) supplying hydrogen peroxide to the chamber;
- (4) sterilizing the article before plasma is generated;
- (5) generating a plasma in the chamber; and
- (6) sterilizing the article by keeping it in the chamber for a period of time.

The Jacobs process, however, does not disclose the specific process recited in claim 1 which requires decompressing the chamber, supplying hydrogen peroxide after the decompression step, supplying ozone after supplying the hydrogen peroxide, sterilizing the

object, exhausting gas from the chamber after the sterilization, and generating plasma after exhausting the gas from the chamber.

Although the various references disclose particular features of the claimed invention, which are admittedly known, the collective teachings of the Duroselle, Lin and Jacobs do not disclose the various steps recited in claim 1 in a single process. Furthermore, there is no reason to combine the references to include the steps in the specific sequence required in claim 1. Note, as described in the present application, as originally filed, the process recited in claim 1 overcomes the problems of the conventional processes (paragraphs 0002 to 0005) which are similar to the prior art processes disclosed in Duroselle, Lin and Jacobs. As noted in paragraph 0002 of the present specification, conventional arrangements "include those combining hydrogen peroxide with plasma, those combining ozone with plasma and those combining hydrogen peroxide with ozone." However, the conventional processes (including the processes disclosed in Duroselle, Lin and Jacobs) do not include combining hydrogen peroxide, ozone and plasma in the manner recited in claim 1. The present invention, as defined in claim 1, provides a harmless sterilization process because the hydrogen peroxide and ozone remaining near the object to be sterilized are broken down.

The remaining references, applied in rejections of the dependent claims, have been reviewed and it is clear that these references do not disclose or suggest the process recited in claim 1 or the apparatus recited in claim 5.

In view of the above, it is submitted that the present application is now clearly in condition for allowance. The Examiner therefore is requested to pass this case to issue.

In the event that the Examiner has any comments or suggestions of a nature necessary to place this case in condition for allowance, then the Examiner is requested to contact Applicant's undersigned attorney by telephone to promptly resolve any remaining matters.

Respectfully submitted,

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